

Delrin 1.25 ✓



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
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**D2002-015**

**Job Sheet 189153**



Part No: D2002-015

Job Qty: 12 pcs

DAS  
21  
9-89

Part Name: Knob

20PCS



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/21/19

Job Tracking No:

Due Date: 2/12/19

Created By: Dara Macdonald

Type: Stock

Description:

Note: DWG REV A IPP C 00.05.18 Added inspection level 8 EC IPP Rev:D Now on Doosan Lathe JLM Verified By:EC

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation  | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off |
|-------|------------|--------|------------|----------|-----------|---------|-----------------------|-----------|----------|
|       |            |        |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |          |
| 100   | Doosan - 1 | 12 pcs | 2/12/19    | 2/12/19  | 0.00      | 0.00    | Doosan - 1            |           |          |
| 110   | QC 2       | 12 pcs | 2/12/19    | 2/12/19  | 0.00      | 0.00    | QC 2 - 1              |           |          |
|       |            |        |            |          |           |         | QC 2 - 12             |           |          |
|       |            |        |            |          |           |         | QC 2 - 14             |           |          |
|       |            |        |            |          |           |         | QC 2 - 17             |           |          |
|       |            |        |            |          |           |         | QC 2 - 19             |           |          |
|       |            |        |            |          |           |         | QC 2 - 2              |           |          |
|       |            |        |            |          |           |         | QC 2 - 20             |           |          |
|       |            |        |            |          |           |         | QC 2 - 22             |           |          |
|       |            |        |            |          |           |         | QC 2 - 23             |           |          |
|       |            |        |            |          |           |         | QC 2 - 25             |           |          |
|       |            |        |            |          |           |         | QC 2 - 32             |           |          |
|       |            |        |            |          |           |         | QC 2 - 33             |           |          |
|       |            |        |            |          |           |         | QC 2 - 35             |           |          |
|       |            |        |            |          |           |         | QC 2 - 38             |           |          |
|       |            |        |            |          |           |         | QC 2 - 39             |           |          |
|       |            |        |            |          |           |         | QC 2 - 4              |           |          |
|       |            |        |            |          |           |         | QC 2 - 40             |           |          |
|       |            |        |            |          |           |         | QC 2 - 44             |           |          |
|       |            |        |            |          |           |         | QC 2 - 45             |           |          |
|       |            |        |            |          |           |         | QC 2 - 48             |           |          |
|       |            |        |            |          |           |         | QC 2 - 49             |           |          |
|       |            |        |            |          |           |         | QC 2 - 50             |           |          |
|       |            |        |            |          |           |         | QC 2 - 51             |           |          |
|       |            |        |            |          |           |         | QC 2 - 52             |           |          |
|       |            |        |            |          |           |         | QC 2 - 54             |           |          |
|       |            |        |            |          |           |         | QC 2 - 56             |           |          |
|       |            |        |            |          |           |         | QC 2 - 57             |           |          |
|       |            |        |            |          |           |         | QC 2 - 62             |           |          |



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CANADA  
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Email: sales@dartaero.com  
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Container No: S148908



Part: D2002-015

Job No: 189153

Serial No/Batch: S148908

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 01/29/19

[illegible]

140 QC 21 - SA

12 pcs

2/12/19

0.00 0.00

QC 21 - SA - 21

QC 21 - SA - 70

JAN 31 2019

Part Op **100** - (Doosan Lathe) 1-Turn as per folio FA005 & dwg FOLIO REV: \_\_\_\_\_ DWG REV: \_\_\_\_\_ 2-Debur as required  
Descriptions: **110** - QC2- Inspect parts off machine FAI/FAIB  
**120** - QC8- Inspect parts - second check  
**130** - (Identify as per dwg & Stock Location: \_\_\_\_\_) LOCATION : GA  
**140** - QC21- Final Inspection - Work Order Release

**Job BOM**

| Part / Item   | Component Name                      | Quantity                  | Operation      | Container          |
|---------------|-------------------------------------|---------------------------|----------------|--------------------|
| MDELRINR1.250 | Delrin Round Bar 1.25" Color: Black | .6000 ft (.05 ea)<br>1055 | 100-Doosan - 1 | 5090365<br>5125912 |

**Job Allocations**

| Operation      | Component Part | Required | Inventory | Allocated |
|----------------|----------------|----------|-----------|-----------|
| 100-Doosan - 1 | MDELRINR1.250  | 1        | 7         | 0         |

**Part Specifications**

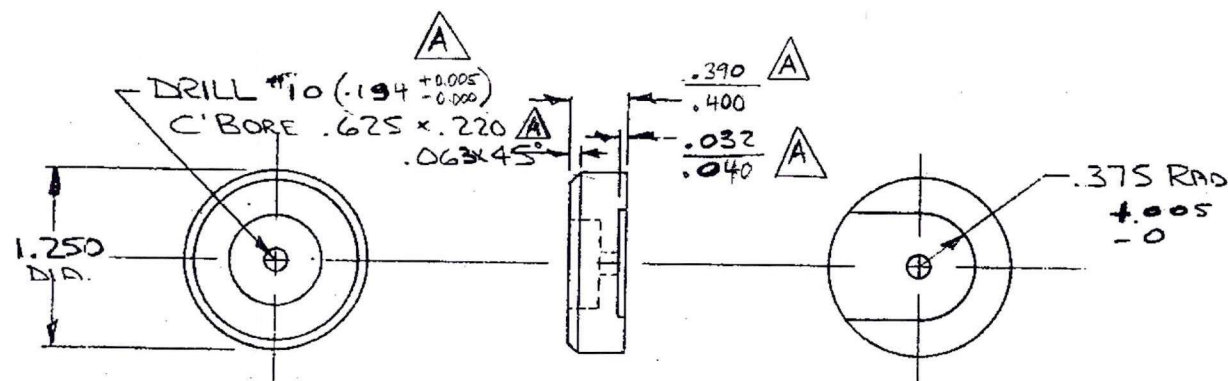
Specifications could not be found.

Plex 1/21/19 11:07 AM Dart.Macdonald.Dara



RELEASED

79.12.09 DS



DETAIL OF D2002-015

4/F: BLACK DELRIN OR  
A BLACK UHMW PER D2689



D2002-015

|                                                                                                                                                          |  |                                                                                                                                                                                                                |  |                                            |  |              |  |                                                   |  |                                   |  |               |  |               |  |                           |  |     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------|--|--------------|--|---------------------------------------------------|--|-----------------------------------|--|---------------|--|---------------|--|---------------------------|--|-----|--|
| <b>REVISION</b><br>DRAWN<br>CHECKED<br>APPROVED<br>OF<br>CHANGE                                                                                          |  | THIS DRAWING IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE PERMISSION OF DART AERO. |  | RIVET CODE SHALL BE PER NAS 823            |  | QTY REQUIRED |  | PART NO.                                          |  | ITEM                              |  | DESCRIPTION   |  | MATERIAL      |  | SPEC/VENDOR               |  |     |  |
| REQUIREMENTS — UNLESS OTHERWISE SPECIFIED                                                                                                                |  | GENERAL                                                                                                                                                                                                        |  | LIMITS                                     |  | BASIC CODE   |  | ON DASH NO<br>INHEAD NEAR SIDE<br>INHEAD FAR SIDE |  | LENGTH DASH NO<br>INHEAD FAR SIDE |  | CONTRACT NO.  |  | DATE          |  | DART AERO ACCESSORIES INC |  |     |  |
| 1. DIMENSIONS ARE IN INCHES<br>2. SURFACE FINISHNESS 125<br>3. REMOVING SHARP EDGES .015 MAX.<br>4. THREADS PER NAS 1-11.75-12<br>5. HOLES PER NAS 10387 |  | 1. TOLERANCES — .005 ± .030<br>2. ANGLES .005 ± .010<br>3. PARALLELISM .005<br>4. ECCENTRICITY .005 MAX.<br>5. STRAIGHTNESS .005<br>6. ALL M/C CENTRE LINES .005                                               |  | BASIC CODES<br>84452047040<br>88-452047040 |  | APPROVAL     |  | DRAWN<br>P. RADLEY                                |  | DATE<br>9/10/08                   |  | CLIENT        |  | TITLE<br>KNOB |  | CODE<br>D2002             |  | REC |  |
| REPORT ALL DISCREPANCIES — DO NOT SCALE                                                                                                                  |  | CHECKED<br>P. RADLEY                                                                                                                                                                                           |  | DATE<br>9/10/08                            |  | CLIENT       |  | SCALE<br>1:1                                      |  | SHT<br>1 OF 2                     |  | TITLE<br>KNOB |  | CODE<br>D2002 |  | REC                       |  |     |  |

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sequence #: _____                                                                                                                 | QTY Affected : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |

